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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,484

02/23/2005

Laurent Pierre Francois Bousis

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BRIARCLIFF MANOR, NY 10510

EXAMINER

ROOT, ROBERT M

ART UNIT

PAPER NUMBER

4183

MAIL DATE

DELIVERY MODE

10/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/525,484

Applicant(s)

BOUSIS, LAURENT PIERRE
FRANCOIS

Examiner

Robert Root

Art Unit

4183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 23, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date February 23, 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

3. In the present instance, claims 1, 5, 7, 8, 12, 14, 15, 16, and 17 are rejected under 35 U.S.C. 112, second paragraph, for reciting a broad claim of what communication network protocols are covered by the invention and reciting how the packets from differing protocols move to alternate networking protocols, which is the narrower statement of the range/limitation. Broad claim recitation includes using terms "first addressing" and "second addressing." For the duration of this examination, the examiner will broadly interpret that the term "first addressing"

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will include Internet Protocol v4, or IPv4, and "second addressing" will include Internet Protocol v6, or IPv6.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-7 are rejected as broadly interpreted and explained above and further under 35 U.S.C. 103(a) as obvious in view of Templin (U.S. Patent Application Number 2001/0040895) and further in view of Mahalingaiah (U.S. Patent Application Number 2002/0114326 A1) and Wang et al (*DDTS: A Transparent and Scalable Solution for IPv4 to IPv6 Transition*, IEEE, March 2001).

Templin teaches the method of handling messages in an interface between an external network and an internal network comprising the steps of:

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- Setting a first address according to a first addressing (IPv4) protocol on a port connected to the external network (global) for the transmission of messages according to the first address (IPv4)
- Transmitted messages comprise messages including embedded messages according to a second addressing (IPv6) protocol and messages according to the first addressing (IPv4) protocol.

Furthermore, Templin discloses:

- Address of an internal network port belongs to the same subnet as the address of the external network port
- The address of the second port is at the same hierarchical level in the same addressing system as the address of the external network port
- Steps of receiving at least one message according to the first addressing protocol on the first port
- Determine if the message includes an embedded message according to the second protocol
- Step of determining includes analyzing the protocol field of the message header and determining that it is a message including an embedded message if the protocol field indicates this
- Extracting the embedded message according to the second addressing protocol from the message according to the first addressing protocol and forwarding the extracted message to a port interfaced with a network according to a second addressing protocol

(Abstract, Paragraph 0007, Figure 2; Paragraph 0035).

Templin fails to teach what happens to received non-embedded IPv4 messages, how the interface could handle internal network traffic that uses two different addressing protocols, or assign functions to specific ports on the interface device.

However, Mahalingaiah teaches the method of handling messages in an interface between an external network and an internal network comprising the steps of:

- Assigning a second address to the second port.
- Assigning a second port connected to a first part of the internal network as a port to be used for all messages not including embedded messages (forwarded directly)
- Assigning the second port as a port to be used comprises setting the port as a default port for the first part of the internal network
- Forwarding the message unchanged to the second port for sending to the first part of the internal network

for the purpose of allowing communication between nodes on separate networks, internal and external, of different addressing protocols. (Abstract; Figure 3; Paragraphs 0053-0055, and 0059).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine Templin's method with Mahalingaiah's in order to provide one method that allows one interface unit capable of passing messages, embedded and non-embedded, from the external network to one of two internal networks, one network using the same protocol as the external network (IPv4) while the other is the second, alternate protocol (IPv6). It would have been obvious to assign dedicated ports on the interface unit for each network in order to allow messages to transfer from one network protocol to another.

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In addition, Wang discloses the method of:

- Informing the first part of the internal network about the second port and its address, such that original messages according to the first address can be transferred between the internal network and the external network.
- Assigning a second address to the second port, which is closely related to the address of the first port

which will enable the method to allow communication between external network nodes, using the first addressing protocol, with nodes on the internal networks using the first and second addressing protocol (Page 249, Paragraph 9 – Page 250, Paragraph 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the combination of Templin and Mahalingaiah's methods mentioned above with Wang's in order to provide a method that allows for one interface unit capable of assigning addresses to nodes within an internal network of separate addressing protocols. This will allow communication between external network nodes, using the first addressing protocol, with nodes on the internal networks using the first and second addressing protocols.

7. Claims 8-14 are rejected as broadly interpreted and explained above and further under 35 U.S.C. 103(a) as obvious in view of Templin (U.S. Patent Application Number 2001/0040895) and further in view of Mahalingaiah (U.S. Patent Application Number 2002/0114326 A1) and Wang et al (*DDTS: A Transparent and Scalable Solution for IPv4 to IPv6 Transition*, IEEE, March 2001).

Templin teaches an interface device between an external network and an internal network comprising the steps of:

- Setting a first address according to a first addressing (IPv4) protocol on a port connected to the external network (global) for the transmission of messages according to the first address (IPv4)
- Transmitted messages comprise messages including embedded messages according to a second addressing (IPv6) protocol and messages according to the first addressing (IPv4) protocol.

Furthermore, Templin discloses:

- Address of an internal network port belongs to the same subnet as the address of the external network port
- The address of the second port is at the same hierarchical level in the same addressing system as the address of the external network port
- Steps of receiving at least one message according to the first addressing protocol on the first port
- Determine if the message includes an embedded message according to the second protocol
- Step of determining includes analyzing the protocol field of the message header and determining that it is a message including an embedded message if the protocol field indicates this

- Extracting the embedded message according to the second addressing protocol from the message according to the first addressing protocol and forwarding the extracted message to a port interfaced with a network according to a second addressing protocol

(Abstract, Paragraph 0007, Figure 2; Paragraph 0035).

Templin fails to teach what happens to received non-embedded IPv4 messages, how the interface could handle internal network traffic that uses two different addressing protocols, or assign functions to specific ports on the interface device.

However, Mahalingaiah teaches in the same field of endeavor an interface device between an external network and an internal network comprising the steps of:

- Assigning a second address to the second port.
- Assigning a second port connected to a first part of the internal network as a port to be used for all messages not including embedded messages (forwarded directly)
- Assigning the second port as a port to be used comprises setting the port as a default port for the first part of the internal network
- Forwarding the message unchanged to the second port for sending to the first part of the internal network

for the purpose of allowing communication between nodes on separate networks, internal and external, of different addressing protocols (Abstract; Figure 3; Paragraphs 0053-0055, and 0059).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine Templin's method with Mahalingaiah's in order to provide one interface device capable of passing messages, embedded and non-embedded, from the external network to one of two internal networks, one network using the same legacy protocol as the

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external network (IPv4) while the other is the more modern protocol (IPv6). It would have been obvious to assign dedicated ports on the interface unit for each network in order to allow messages to transfer from one network protocol to another.

In addition, Wang teaches in the same field of endeavor an interface device capable of:

- Informing the first part of the internal network about the second port and its address, such that original messages according to the first address can be transferred between the internal network and the external network.
- Assigning a second address to the second port, which is closely related to the address of the first port

which will allow communication between external network nodes, using the first addressing protocol, with nodes on the internal networks using the first and second addressing protocol (Page 249, Paragraph 9 – Page 250, Paragraph 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the combination of Templin and Mahalingaiah's methods mentioned above with Wang's in order to provide one interface device capable of assigning addresses to nodes within an internal network of separate addressing protocols. This will allow communication between external network nodes, using the first addressing protocol, with nodes on the internal networks using the first and second addressing protocols.

8. Claim 15 is rejected as broadly interpreted and explained above and further under 35 U.S.C. 103(a) as obvious over Mahalingaiah (U.S. Patent Application Number 2002/0114326 A1) and further in view of Templin (U.S. Patent Application Number 2001/0040895).

Mahalingaiah teaches an internal network comprising the steps of:

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- a first part
- an interface device, connectable between the first part and the external network, said interface device comprising
 - a second port connected to the first part of the internal network
 - a control unit arranged to:
 - a second port as a port to be used for messages sent unchanged from the first port
 - inform the first part of the internal network about the second port and its address, such that original messages according to the first address can be transferred between the internal network and the external network
 - assign a second address to the second port, which is closely related to the address of the first port

(Abstract; Figure 3; Paragraphs 0053-0055, and 0059).

Mahalingaiah fails to teach the interface device is capable of receiving embedded and non-embedded messages according to a first addressing protocol from an external network, the first part of the internal network uses the second port on the interface device for all messages not including embedded messages, and a second address is assigned a port, which is closely related to the address of the first port.

In the same field of endeavor, Templin teaches about an interface device comprising the steps of:

- an interface device connectable between the first part and the external network, said interface device comprising:

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- a first port connectable to the external network for reception of messages sent according to the first address and having a first address according to a first addressing protocol, where received messages comprise messages including embedded messages according to a second addressing protocol and original messages according to the first address.

for the purpose of allowing an internal network that utilizes both first and second addressing protocols to interact with an external network using the first addressing protocol (Abstract, Paragraph 0007, Figure 2; Paragraph 0035).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to take the interface device in the communication network taught by Mahalingaiah and modify it by adding to it the functionality of the interface device taught by Templin which will allow nodes in an internal network either on a network using the first addressing protocol or a network using the second addressing protocol to become capable of communicating with nodes on an external network using the first addressing protocol.

9. Claim 16 is rejected as broadly interpreted and explained above and further under 35 U.S.C. 103(a) as obvious over Mahalingaiah (U.S. Patent Application Number 2002/0114326 A1) and further in view of Wang et al (*DDTS: A Transparent and Scalable Solution for IPv4 to IPv6 Transition*, IEEE, March 2001).

Mahalingaiah teaches a computer program product with a computer readable medium usable on a computer connectable between an internal and external network and having a first address according to a first addressing protocol to be used on a first port connectable to the external network for transmission of messages and a computer readable medium having thereon:

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- computer program code means, to make the computer execute, when said program is loaded in the computer:
 - assigning a second port connectible to a first part of the internal network
 - assign a second address to the second port, which is closely related to the address of the first port
 - informing the first part of the internal network about the second port and its address, such that messages can be transferred between the internal network and the external network

(Abstract; Figure 3; Paragraphs 0051-0053, 0055, and 0059).

Mahalingaiah fails to teach that the first port connected to the computer, connected to an external network, passes embedded and non-embedded messages according to the first addressing protocol, and the second port is dedicated to the internal network with a matching address and addressing protocol to the first port for all messages not including embedded messages.

However, in the same field of endeavor Wang discloses about a computer program product comprising a computer readable medium to be used on a computer that is connectable between an internal and external network and having a first address according to a first addressing protocol to be used on a first port connectable to the external network for transmission of messages according to the first addressing protocol, where transmitted messages comprise messages including embedded messages according to a second addressing protocol and original messages according to the first addressing protocol, said computer readable medium having thereon:

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- computer program code means, to make the computer execute, when said program is loaded in the computer:
 - assigning a second port connectable to a first part of the internal network as a port to be used for all messages not including embedded messages,
 - assigning a second address to the second port, which is closely related to the address of the first port, and
 - informing the first part of the internal network about the second port and its address, such that original messages according to the first addressing protocol can be transferred between the internal network and the external network

(Page 249, Paragraph 9 – Page 250, Paragraph 1; Page 250, Paragraph 5 – Page 251, Paragraph 1; Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to take the computer program product with a computer readable medium taught by Mahalingaiah and modify it by adding functionality as taught by Wang, which would create one computer program product comprising a computer readable medium to control an interface device to allow nodes in an internal network either on a network using the first addressing protocol or a network using the second addressing protocol to become capable of communicating with nodes on an external network using the first addressing protocol.

10. Claim 17 rejected as broadly interpreted and explained above and further under 35 U.S.C. 103(a) as obvious over Mahalingaiah (U.S. Patent Application Number 2002/0114326 A1) and further in view of Wang et al (*DDTS: A Transparent and Scalable Solution for IPv4 to IPv6 Transition*, IEEE, March 2001).

Mahalingaiah teaches a computer program element usable on a computer connectable between an internal and external network and having a first address according to a first addressing protocol to be used on a first port connectable to the external network for transmission of messages and a computer readable medium having thereon:

- computer program code means, to make the computer execute, when said program is loaded in the computer:
 - assigning a second port connectable to a first part of the internal network
 - assign a second address to the second port, which is closely related to the address of the first port
 - informing the first part of the internal network about the second port and its address, such that messages can be transferred between the internal network and the external network

(Abstract; Figure 3; Paragraphs 0051-0053, 0055, and 0059).

Mahalingaiah fails to teach that the first port connected to the computer, connected to an external network, passes embedded and non-embedded messages according to the first addressing protocol, and the second port is dedicated to the internal network with a matching address and addressing protocol to the first port for all messages not including embedded messages.

However, in the same field of endeavor Wang discloses about a computer program element to be used on a computer that is connectable between an internal and external network and having a first address according to a first addressing protocol to be used on a first port connectable to the external network for transmission of messages according to the first

addressing protocol, where transmitted messages comprise messages including embedded messages according to a second addressing protocol and original messages according to the first addressing protocol, said computer readable medium having thereon:

- computer program code means, to make the computer execute, when said program is loaded in the computer:
 - assigning a second port connectable to a first part of the internal network as a port to be used for all messages not including embedded messages,
 - assigning a second address to the second port, which is closely related to the address of the first port, and
 - informing the first part of the internal network about the second port and its address, such that original messages according to the first addressing protocol can be transferred between the internal network and the external network

(Page 249, Paragraph 9 – Page 250, Paragraph 1; Page 250, Paragraph 5 – Page 251, Paragraph 1; Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to take the computer program product with a computer readable medium taught by Mahalingaiah and modify it by adding functionality as taught by Wang, which would create one computer program element to control an interface device to allow nodes in an internal network either on a network using the first addressing protocol or a network using the second addressing protocol to become capable of communicating with nodes on an external network using the first addressing protocol.

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Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang et al (*DDTS: A Transparent and Scalable Solution for IPv4 to IPv6 Transition*, IEEE, March 2001.)

Carpenter et al (*Connection of IPv6 Domains via IPv4 Clouds*, Network Working Group, February 2001).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Root whose telephone number is 571-270-1960. The examiner can normally be reached on Monday to Thursday from 7:30am to 5:00pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Robert Root
Examiner Robert Root
October 4, 2007

Supervising *Jen*
LENTAN
PRIMARY EXAMINER
10/16/07